



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D4149-5

Job Sheet 180914



Part No: D4149-5

Job Qty: 10 ea

Part Name: Eyebolt Stud



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/17/18

Job Tracking No:

Due Date: 7/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV C IPP REV:A NEW ISSUE 10-07-22 JLM VERIFIED BY:DD IPP Rev:B 11.03.03 as per revC DD verf:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	10 Ea	7/31/18	7/31/18	0.00	0.00	Start Up Machining-2		
100	Doosan	10 pcs	7/31/18	7/31/18	0.33	2.68	Doosan		
120	QC	10 pcs	7/31/18	7/31/18	0.00	0.00	QC8		
150	Packaging	10 pcs	7/31/18	7/31/18	0.00	0.00	Packaging3-2		
160	QC21-SA	10 Ea	7/31/18	7/31/18	0.00	0.00	QC21		

Part Op 100 - turn as per dwg and folio FA950
Descriptions:

DAS AUG 20 2018
21
9-89

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M303R1.000	303 Round Bar 1.00	2.5000 ft (.25 ea)	90-Start up Operation	J09481E

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M303R1.000	3	37	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Eyebolt Stud	0.250Inches + 0.003 - 0.000	0.253 0.250	251 Diameter	
2	Eyebolt Stud	1.380Inches ± 0.030	1.410 1.350	1.379	
3	Eyebolt Stud	0.400Inches + 0.000 - 0.010	0.400 0.390	.396	
4	Eyebolt Stud	0.700Inches + 0.010 - 0.000	0.710 0.700	.700	
5	Eyebolt Stud	0.030Inches ± 0.010	0.040 0.020	.032 Radius	
6	Eyebolt Stud	0.375Inches + 0.000 - 0.020	0.375 0.355	.367 Diameter	
7	Eyebolt Stud	0.700Inches + 0.000 - 0.010	0.700 0.690	.695 Diameter	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																	
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																	
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																	
Large Fab ☐	Composite ☐	Supplier ☐																																																																		
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																
Description Work Order Deviation		Disposition		Completed By																																																																
				Lead hand / Supervisor Approval Verification																																																																
				QC / QA Coordinator Approval																																																																
Root Cause		FAULT CATEGORY																																																																		
<table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">Past Due ☐</td></tr> </table>	Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width:100%; border: none;"> <tr><td style="border: none;">Pressure/Forced ☐</td></tr> <tr><td style="border: none;">Bending ☐</td></tr> <tr><td style="border: none;">Centre Not Concentric ☐</td></tr> <tr><td style="border: none;">Cracks ☐</td></tr> <tr><td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td></tr> <tr><td style="border: none;">Cuffs ☐</td></tr> <tr><td style="border: none;">Crushing ☐</td></tr> <tr><td style="border: none;">Heat Treat ☐</td></tr> <tr><td style="border: none;">Wave/Twist in Tube ☐</td></tr> <tr><td style="border: none;">Marks/Chatter ☐</td></tr> </table>	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	<table style="width:100%; border: none;"> <tr><td style="border: none;">Temperature/Cure ☐</td></tr> <tr><td style="border: none;">Set-up ☐</td></tr> <tr><td style="border: none;">BOM/Route ☐</td></tr> <tr><td style="border: none;">Broken/Damage/Defect ☐</td></tr> <tr><td style="border: none;">Inspection Incomplete/Unqualified ☐</td></tr> <tr><td style="border: none;">Contamination ☐</td></tr> <tr><td style="border: none;">Countersink ☐</td></tr> <tr><td style="border: none;">Cut Too Short ☐</td></tr> <tr><td style="border: none;">Instructions Incomplete/Unclear ☐</td></tr> <tr><td style="border: none;">Drill Holes ☐</td></tr> </table>	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	<table style="width:100%; border: none;"> <tr><td style="border: none;">Power Loss/Surge ☐</td></tr> <tr><td style="border: none;">Folio/Program ☐</td></tr> <tr><td style="border: none;">Grain ☐</td></tr> <tr><td style="border: none;">Weld ☐</td></tr> <tr><td style="border: none;">Wrong Stock Pulled ☐</td></tr> <tr><td style="border: none;">Out of Sequence ☐</td></tr> <tr><td style="border: none;">Off-set ☐</td></tr> <tr><td style="border: none;">Mislabeled ☐</td></tr> <tr><td style="border: none;">Fit/Function ☐</td></tr> <tr><td style="border: none;">Misaligned/off center ☐</td></tr> </table>	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	<table style="width:100%; border: none;"> <tr><td style="border: none;">Positioned Wrong ☐</td></tr> <tr><td style="border: none;">Outside Dimensions ☐</td></tr> <tr><td style="border: none;">Over/Under tolerance ☐</td></tr> <tr><td style="border: none;">Part Incorrect ☐</td></tr> <tr><td style="border: none;">Part Lost/Missing ☐</td></tr> <tr><td style="border: none;">Part Moved ☐</td></tr> <tr><td style="border: none;">Drawing ☐</td></tr> <tr><td style="border: none;">Finish ☐</td></tr> <tr><td style="border: none;">Misread ☐</td></tr> <tr><td style="border: none;">Turning Sequence ☐</td></tr> </table>	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																			
Design ☐	Operator ☐																																																																			
Doc/Data ☐	Offset/Setup ☐																																																																			
Equip/Tooling ☐	Supplier ☐																																																																			
Handling/Pre ☐	Training ☐																																																																			
Material ☐	Use for Testing ☐																																																																			
Internal Transport ☐	Poor Information ☐																																																																			
Tribal Knowledge ☐	Rushing ☐																																																																			
LOA ☐	Product Improvement ☐																																																																			
Substation ☐	Process Improvement ☐																																																																			
Past Expiry Date ☐	Manufacturing Process ☐																																																																			
Misidentified ☐	Past Due ☐																																																																			
Pressure/Forced ☐																																																																				
Bending ☐																																																																				
Centre Not Concentric ☐																																																																				
Cracks ☐																																																																				
Crimp/Kink/Ripple/Wave ☐																																																																				
Cuffs ☐																																																																				
Crushing ☐																																																																				
Heat Treat ☐																																																																				
Wave/Twist in Tube ☐																																																																				
Marks/Chatter ☐																																																																				
Temperature/Cure ☐																																																																				
Set-up ☐																																																																				
BOM/Route ☐																																																																				
Broken/Damage/Defect ☐																																																																				
Inspection Incomplete/Unqualified ☐																																																																				
Contamination ☐																																																																				
Countersink ☐																																																																				
Cut Too Short ☐																																																																				
Instructions Incomplete/Unclear ☐																																																																				
Drill Holes ☐																																																																				
Power Loss/Surge ☐																																																																				
Folio/Program ☐																																																																				
Grain ☐																																																																				
Weld ☐																																																																				
Wrong Stock Pulled ☐																																																																				
Out of Sequence ☐																																																																				
Off-set ☐																																																																				
Mislabeled ☐																																																																				
Fit/Function ☐																																																																				
Misaligned/off center ☐																																																																				
Positioned Wrong ☐																																																																				
Outside Dimensions ☐																																																																				
Over/Under tolerance ☐																																																																				
Part Incorrect ☐																																																																				
Part Lost/Missing ☐																																																																				
Part Moved ☐																																																																				
Drawing ☐																																																																				
Finish ☐																																																																				
Misread ☐																																																																				
Turning Sequence ☐																																																																				
OTHER : _____																																																																				

8	Eyebolt Stud	0.200Inches ± 0.010	0.210 0.190	.205
9	Eyebolt Stud	1.500Inches ± 0.010	1.510 1.490	1.500
10	Eyebolt Stud	0.060Inches ± 0.030	0.090 0.030	.065 Radius
11	Eyebolt Stud	2.880Inches ± 0.030	2.910 2.850	2.879
12	Eyebolt Stud	0.310Inches ± 0.010	0.320 0.300	.31
13	Eyebolt Stud	0.750Inches + 0.003 - 0.000	0.753 0.750	.751
14	Eyebolt Stud	0.750Inches ± 0.030	0.780 0.720	.75
15	Eyebolt Stud	0.735Inches ± 0.010	0.745 0.725	.74

Plex 7/17/18 3:07 PM Dart.lajeunesse.marie

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	

Root Cause

Environment	☐
Design	☐
Doc/Data	☐
Equip/Tooling	☐
Handling/Pre	☐
Material	☐
Internal Transport	☐
Tribal Knowledge	☐
LOA	☐
Substation	☐
Past Expiry Date	☐
Misidentified	☐

DART AEROSPACE

1270 Aberdeen Street
Hamilton, ON K8A 1K7
TEL: 1 613 832-8200
Email: sales@dartaero.com
www.dartaero.com

Container No: S102086

Part: D4149 - 5

Job No: 180914

Serial No/Batch: S102086

Revision: _____

Inspector: _____

Exp Date: _____

Instructions: Various STC's

Date: 08/14/18

Power Loss/Surge ☐	Positioned Wrong ☐
Folio/Program ☐	Outside Dimensions ☐
Grain ☐	Over/Under tolerance ☐
Weld ☐	Part Incorrect ☐
Wrong Stock Pulled ☐	Part Lost/Missing ☐
Out of Sequence ☐	Part Moved ☐
Off-set ☐	Drawing ☐
Mislabeled ☐	Finish ☐
Fit/Function ☐	Misread ☐
Misaligned/off center ☐	Turning Sequence ☐